

XP-002218566

AN - 1987-309423 [44]  
A - [001] 014 028 034 04- 05- 055 059 074 075 076 077 079 081 085 086 128  
130 132 133 153 175 185 191 231 28& 316 332 398 402 414 431 432 443  
473 477 52& 532 533 546 57& 575 582 583 589 595 623 624 681 688 721  
AP - JP19860059343 19860319; JP19860059343 19860319  
CPY - JAPC  
- JAPC  
DC - A26 J01  
DR - 0270-U 0271-U 0272-U 0304-U 0437-U  
FS - CPI  
IC - B01D53/02 ; B01D53/06 ; B01J20/26 ; C02F1/28  
KS - 0013 0036 0037 0203 0231 0356 0419 0496 0503 0601 0643 1124 1166 1173  
2020 2318 2393 2422 2427 2437 2507 2569 2585 2647 2653 2726 2733 3124  
3193  
MC - A05-J07 A12-W11D J01-E03C  
PA - (JAPC ) NIPPON SHOKUBAI KAGAKU KOGYO CO LTD  
- (JAPC ) NIPPON SHOKUBAI KAGAKU KOGYO  
PN - JP62216641 A 19870924 DW198744 005pp  
- JP4017089B B 19920325 DW199216 005pp  
PR - JP19860059343 19860319  
XA - C1987-131672  
XIC - B01D-053/02 ; B01D-053/06 ; B01J-020/26 ; C02F-001/28  
AB - J62216641 Adsorbent for acidic acids, surfactant and heavy metals etc.  
comprises polyethylene imine with mol.wt. of over 5000 supported on  
porous resin.  
- Pref. porous resins used as supports are obtd. by copolymerising  
methacrylic acid, styrene sulphonic acid, sulphoethyl(meth)-acrylate,  
2-acrylamide-2- methylpropane sulphonic acid, diethylglycol  
di(meth)acrylate and divinyl benzene etc. To strengthen supporting  
force between polyethylene imine and support, specific surface area of  
the support must be over 50 m<sup>2</sup>/g, e.g. over 1000 m<sup>2</sup>/g. Under 100  
pts.wt. e.g. under 50 pts.wt. of polyethylene imine are supported on  
100 pts.wt. of the support. Adsorbent is pref. produced by immersing  
porous support in the soln. in which proper amt. of polyethylene imine  
is dissolved in a solvent and then removing the solvent. Solvents used  
are CH<sub>3</sub>OH, C<sub>2</sub>H<sub>5</sub>OH, CH<sub>3</sub>CH(OH)CH<sub>3</sub>, CH<sub>3</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>OH, CH<sub>3</sub>COCH<sub>3</sub> and C<sub>2</sub>H<sub>5</sub>OCH<sub>3</sub>  
etc.  
- ADVANTAGE - Polyethylene imine is strongly supported on a support by a  
simple procedure because of strong force between polyethylene imine  
and the support, the adsorbent can be used in water. As free  
polyethylene imine on the support is little, amts. of polyethylene  
imine supported are controlled.(0/0)  
IW - ADSORB ACIDIC GAS SURFACTANT HEAVY METAL COMPRISE POLYETHYLENE IMINE  
SPECIFIED MOLECULAR WEIGHT SUPPORT POROUS RESIN  
IKW - ADSORB ACIDIC GAS SURFACTANT HEAVY METAL COMPRISE POLYETHYLENE IMINE  
SPECIFIED MOLECULAR WEIGHT SUPPORT POROUS RESIN  
NC - 001  
OPD - 1986-03-19  
ORD - 1987-09-24  
PAW - (JAPC ) NIPPON SHOKUBAI KAGAKU KOGYO CO LTD  
- (JAPC ) NIPPON SHOKUBAI KAGAKU KOGYO

**Tl - Adsorbent for acidic gases, surfactant and heavy metals - comprises polyethylene imine of specified mol. wt, supported on porous resin**